

**Response**

Page 2 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

Filed: December 7, 2000

For: NEAR-INFRARED DISGUISE DETECTION

**Remarks**

The Office Action mailed 29 January 2004 has been received and reviewed. No claims have been amended or cancelled. Therefore, claims 1-37 are pending in the present application. Reconsideration and withdrawal of the rejections are respectfully requested in view of the following remarks.

**Drawings**

It is indicated in the "Office Action Summary" that the drawings filed on 7 December 2000 are objected to by the Examiner. However, replacement sheet drawings were filed with the response filed 28 October 2004. As such, it is believed that this objection is overcome. Acknowledgment that the drawings have been accepted is requested with the next official action issued by the Examiner.

**Comments on Examiner's Response to Argument/arguments**

Applicant acknowledges the Examiner's withdrawal of the previous rejection based on Hacskaylo (U.S. Patent No. 4,500,784). However, as discussed below, Applicant traverses the Examiner's new ground of rejection based on Hacskaylo and Udden et al. (U.S. Patent 5,180,907).

Further, the Examiner in the Response to Argument/arguments indicates that the arguments with respect to Hacskaylo are persuasive. However, the Examiner then goes on in paragraphs 3-9 to indicate that certain arguments are not persuasive. Applicant generally traverses such statements regarding non-persuasiveness of these certain arguments. However, in view of the arguments provided herein with respect to the Examiner's new ground of rejection based on Hacskaylo and Udden et al., it is believed that no further comments regarding such statements are necessary to move this case to issue.

**Response**

Page 3 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

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For: NEAR-INFRARED DISGUISE DETECTION

**Double Patenting Rejection**

Claims 1-37 were provisionally rejected based on 35 U.S.C. 101 as claiming the same invention as that of claims 1-37 of co-pending Application No. 10/308,465.

Claims 1-37 of U.S. Application Serial No. 10/308,465 were cancelled at the time of filing the co-pending Application No. 10/308,465 as indicated in the "Request for Filing a Continuation Application Under Rule §1.53(b) and Preliminary Amendment". A copy of U.S. Patent No. 6,718,049 B2, which issued from Serial No. 10/308,465, is attached hereto. As such the double patenting rejection is moot and the rejection should be withdrawn.

**The 35 U.S.C. §103 Rejection based on Hacskaylo and Udden et al.**

The Examiner rejected claims 1-7, 14-21, 23, 27, 29 and 33-37 under 35 U.S.C. §103(a) as being unpatentable over Hacskaylo (U.S. Patent No. 4,500,784) in view of Udden et al. (U.S. Patent 5,180,907). Applicant respectfully traverses the Examiner's rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. See M.P.E.P. § 2143.

Claim 1 describes a method for use in detection of a person disguised with one or more artificial materials. The method includes detecting reflection from at least one portion of a head of a human body in at least a portion of an upper band of the near infrared spectrum. The presence of an artificial material associated with the head of the human body is determined based on the detected reflection.

Hacskaylo describes, in column 1, lines 60-64, "a technique for automatically detecting a human body when a portion of the body (skin) is exposed to an illuminator-detector device which detects and discriminates the near-infrared reflection bands of the skin." Tables I and II do nothing more than provide reflection and detection properties for skin of a human body. In

**Response**

Page 4 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

Filed: December 7, 2000

For: NEAR-INFRARED DISGUISE DETECTION

other words, Hacskaylo provides nothing more than a way to detect the existence or non-existence of skin in a scene (i.e., using three reflected bands in the near-infrared region).

Hacskaylo does not describe all the elements of claim 1 as recognized by the Examiner. For example, as recited by the Examiner, Hacskaylo is silent as to "the step of: determining the presence of an artificial material associated with the head of the human body based on the detected reflection." However, the Examiner cites Udden et al. to provide the element lacking in Hacskaylo.

Udden et al. does not teach or suggest anything that is even comparable to determining the presence of an artificial material associated with the head of the human body based on the detected reflection as described in claim 1. Rather, Udden et al. only describes system and methods for measuring movement of an eye or eyes of an individual.

For example, as described in column 7, lines 32-39 of Udden et al. as cited by the Examiner, "[a]ttached to the television screen 15 are also an ultrasonic ranging device 17 adapted to measure the distance from the eye to be measured to the television screen, and an IR headlight 19, which produces an IR light beam intended to be used when measuring the movements of the head of the person to be tested. This headlight 19 acts as an artificially enhanced ambient light source."

The language cited by the Examiner has nothing to do with the determination of the presence of an artificial material associated with the head of a human being based on detected reflection. The IR headlight 19 is nothing more than an IR light source to be used in measuring movement of an eye or eyes of an individual. Further, the television screen 15 is nothing more than a display to provide a stimulus to the individual being tested (i.e., a blinking spot as described in lines 25-30 of column 7).

The Examiner indicates that it "would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an artificial material associated with the head of the human body based on the detected reflection as taught by Udden in the system of Hacskaylo because Udden provides Hacskaylo a system for measuring intensity variations of light to the human eye such as IR-light and also contemplates a process for measuring the movements of a

**Response**

Page 5 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

Filed: December 7, 2000

For: NEAR-INFRARED DISGUISE DETECTION

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person's eye, illuminating the eye with light pulse, measuring the light reflected during the time between pulses, evaluating the measured values obtained to provide first rough values of the eye movement and values indicating the movement of the person, s head correcting."

It is not actually understood what it is that the Examiner is citing Udden et al. to show. Claim 1 describes "determining the presence of an artificial material associated with the head of the human body based on the detected reflection." Udden et al. does not describe such determination of the presence of artificial material associated with the head of a human body, but merely describes a manner to measure movement of an individual's eye or eyes.

As such, Hacskaylo and Udden et al. do not describe, teach or suggest all the claim limitations of claim 1. For at least this reason alone, claim 1 is not obvious in view of the cited references.

Further, as claims 2-7 and 14-15 depend on claim 1, either directly or indirectly, they include the limitations thereof. As such, these claims are also not obvious in view of the cited references for the same reasons as provided above and by reason of their own limitations.

For example, the cited references do not describe detecting reflection from a hair portion of the head of the human body. Further, for example, such references do not describe use and control of an illumination source as described in claim 15. Further, the Examiner only objected to claim 28 which describes similar system components corresponding to the method of claim 15. As it is recognized by the Examiner that Hacskaylo and Udden et al. do not show such components with respect to claim 28, claim 15 is believed to be in allowable condition as well.

The Examiner indicates that the basis for rejection of claims 16-21, 23, 27, 29, and 33-37 is similar to the analysis for the other rejected claims. As such, Applicant presents the same reasons as described above with respect to claims 1-7 and 14-15 and argues that these additionally rejected claims are also not obvious in view of Hacskaylo and Udden et al. for the same reasons as provided above with respect to claims 1-7 and 14-15 and by reason of their own limitations.

## Response

Page 6 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

Filed: December 7, 2000

For: NEAR-INFRARED DISGUISE DETECTION

Further, it is noted that claim 23 is believed to be in allowable condition, not only based on the remarks provided above, but also due to the fact that claim 23 is dependent on claim 22 which has only been objected to by the Examiner.

It is respectfully submitted that the rejection of claims 1-7, 14-21, 23, 27, 29 and 33-37 be withdrawn in view of at least the above remarks.

**The 35 U.S.C. §103 Rejection based on Hacskaylo, Udden et al., and Smoot**

The Examiner rejected claims 8-13 and 25-26 under 35 U.S.C. §103(a) as being unpatentable over Hacskaylo (U.S. Patent 4,500,784) and Udden et al (U.S. 5,180,907) as applied to claims 1, 16 and 29 and further in view of Smoot (U.S. Patent 5,940,139). Applicant respectfully traverses this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. See M.P.E.P. § 2143.

Claims 8-13 and 25-26 depend on either independent claim 1 or 16, either directly or indirectly. As such, they each include the limitations thereof. Hacskaylo and Udden et al., as described above with respect to the obviousness rejection of claims 1 and 16, do not describe all the limitations of such independent claims. Smoot was cited by the Examiner to provide elements of the dependent claims that the Examiner indicated were missing from Hacskaylo and Udden et al. Smoot describes only video extraction techniques and does nothing to cure the lack of those elements missing in Hacskaylo and Udden et al. Therefore, the prior art references cited by the Examiner do not teach or suggest all the limitations of claims 8-13 and 25-26 and such claims are not obvious in view of the cited references.

**Response**

Page 7 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

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For: NEAR-INFRARED DISGUISE DETECTION

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Further, it is noted that claims 25-26 are believed to be in allowable condition, not only based on the remarks provided above, but also due to the fact that such claims are dependent on claim 22 which has only been objected to by the Examiner.

It is respectfully submitted that the rejection of claims 8-13 and 25-26 be withdrawn in view of at least the above remarks.

**Allowable Subject Matter**

Applicant further acknowledges that claims 22, 24, 28, and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicant at this time has not rewritten such claims in independent form as it is believed that such claims are dependent from claims that are in allowable condition.

Further, Applicant notes that because claims 23 and 25-26 are dependent upon an objected to claim 22, that such claims are also in allowable condition by reason of their dependency.

**Claim 32**

Although claim 32 was rejected in the "Office Action Summary," claim 32 has not been specifically addressed anywhere else in the Office Action. As such, Applicant generally traverses the Examiner's summary rejection of claim 32 and requests that further detail be provided so that Applicant may have an opportunity to fully address this rejection.

**Response**

Page 8 of 8

Serial No.: 09/732,236

Confirmation No.: 9502

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For: NEAR-INFRARED DISGUISE DETECTION

**Summary**

It is respectfully submitted that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for  
**PAVLIDIS**

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**CERTIFICATE UNDER 37 CFR §1.8:**

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 27 day of April 2004, at 1:00 pm (Central Time).

By: Name: Sandy Truehart